

Claims

1. Method for the production of a security document with at least one security cambric (15) and at least one transponder unit (21), characterized in that
 - at least one laminated layer (22, 23) is applied at least on one side of the at least one security cambric (15) and on at least one side of the at least one transponder unit (21),
 - the at least one security cambric (15) and the at least one transponder unit (21) are fully encompassed by the laminated layers (22, 23) and that a circumferential, closed edge (24) is provided by the laminated layers (22, 23), and
 - that a laminated layer sheath (25) is formed.
2. Method according to claim 1, characterized in that the laminated layer sheath (25) is introduced into a book block (20).
3. Method according to claim 1 or 2, characterized in that the edge (24) of the laminated layers (22, 23) – after complete encompassing of the at least one security cambric (15) and the at least one transponder unit (21) – will be stamped to an end format, cut, or cut to size by other separating methods, for example laser cutting.
4. Method according to any one of the claims 1 to 3, characterized in that the at least one security cambric (15) and the at least one transponder unit (21) are combined in one layer or that a composite (26) is formed by several layers.

5. Method according to any one of the claims 1 to 3, characterized in that at least one transponder unit (21) is applied onto the at least one security cambric (15), and a composite (26) is formed which is encompassed by the laminated layers (22, 23).
6. Method according to any one of the preceding claims, characterized in that a projection (27) is produced on at least one longitudinal side of the laminated layer sheath (25), and that the laminated layer sheath (25) is sewn into a book block (20) in the area of the projection (27).
7. Method according to any one of the claims 1 to 5, characterized in that a double page for a book block (20) is formed by the laminated layer sheath (25) and on one side of the double page, at least one security cambric (15) is introduced and on the adjacent side of the double page, at least one transponder unit (21) is introduced.
8. Method according to claim 7, characterized in that – in the folding area of the double page – a stay, a groove or a perforation is formed, and the double page is sewn into a book block (20) in the area of the stay, the groove or the perforation.
9. Method according to any one of the preceding claims, characterized in that the laminated layers (22, 23) are glued, pressed, welded or combined with each other at least under pressure or temperature.
10. Method according to any one of the preceding claims, characterized in that the at least one transponder unit (21) is personalized after the production of the laminated layer sheath (25).
11. Method according to any one of the preceding claims, characterized in that the at least one transponder unit (21) is personalized with an

algorithm forming a hash value on the basis of the ICAO line and/or of personalization data.

12. Method according to any one of the preceding claims, characterized in that – after the production of a laminated layer sheath (25) – at least one security characteristic is provided in the laminated layer sheath (25), for example lasering or hole punching.
13. Method according to any one of the preceding claims, characterized in that – during or after the production of a security document – a value permanently deposited in the at least one transponder unit (21) is introduced as a security characteristic.
14. Method according to any one of the preceding claims, characterized in that the laminated layers (22, 23) are produced of plastic films, especially of PVC, ABS, PET-G, PET, PE, PP, PA, teslin, PC, or of sandwich-type film combinations especially of the aforementioned materials.
15. Method according to any one of the preceding claims, characterized in that the at least one transponder unit (21) comprises a chip module (39) with an integrated antenna (38) which is applied – by means of a tape automatic bonding process (TAB) – onto at least one security cambric (15) or one laminated layer (22, 23).
16. Method according to any one of the claims 1 to 14, characterized in that the at least one transponder unit (21) comprises a chip module (39) wherein ICs are fastened on contact elements by means of flip chip technology or by means of the conventional bonding technology, with the contact elements being electrically conductively connected with contact ends of the antenna (38).

17. Method according to any one of the claims 1 to 14, characterized in that an un-housed IC (39) is contacted by means of flip chip contacting directly on antenna connections of an antenna (38) designed in a laminated layer (22, 23), for the formation of at least one transponder unit (21).
18. Method according to claim 16, characterized in that the at least one transponder unit (21) comprises a chip module (39) for contacting an external coil or antenna (38), with the coil or antenna (38) being produced through screen printing by means of polymer and conductive pastes, through enamel-insulated metallic wires, especially by means of ultrasonic sonotrode laying technique, through insertion or lamination of an air coil into corresponding recesses, through flexible printed circuit boards in subtractive technique, through an etching technique in metallic surfaces or through an inkjet technique with a conductive medium, especially ink.
19. Method according to any one of the preceding claims 15 to 18, characterized in that the chip module (39) is fastened by means of a casting compound between the at least two laminated layers (22, 23).
20. Method according to any one of the claims 1 to 14, characterized in that a chip module (39) with integrated antenna (38) is directly applied on a security cambric (15) and the thickness of the at least one laminated layer (22, 23) is locally thinned or punched out in the area of the chip module (39).
21. Method according to any one of the preceding claims, characterized in that the at least one laminated layer (22, 23) is processed as a transparent film for the production of the laminated layer sheath (25).

22. Book-type security document, especially according to any one of the preceding claims, with at least one security cambric (15), characterized in that at least one security cambric (15) and at least one transponder unit (21) are fully encompassed by at least one laminated layer (22, 23), and that a laminated layer sheath (25) is formed, fully encompassing the at least one security cambric (15) and the at least one transponder unit (21).
23. Security document according to claim 22, characterized in that the at least one security cambric (15) and the at least one transponder unit (21) are each designed smaller than or equal to an end format of a page of a book block (20).
24. Security document according to claim 22 or 23, characterized in that the at least one security cambric (15) is designed as an inside page or a personalization page for a book block (20) or as an end page (14).
25. Book-type security document according to any one of the claims 22 to 24, characterized in that the at least one laminated layer (22, 23) is designed as a cover film or as an overlay film.